

REMARKS/ARGUMENTS

Claims 1-18, 20, and 22-24 are pending in this application. By this Amendment, Applicant AMENDS claims 1, 17, 20, and 22-24 and CANCELS claims 19, 21, and 25.

Applicant's representative greatly appreciates the Examiner extending the courtesy of the telephone interview on June 5, 2007. During the telephone interview, the rejections under 35 U.S.C. § 101 and 35 U.S.C. § 103(a) were discussed.

Claims 1, 17, 20, and 22-25 were objected to because the acronym "IC" was not defined in the claims. Applicant has amended claims 1, 17, 20, and 22-24 to define the acronym "IC" in the claims. Applicant has canceled claim 25. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the objection to claims 1, 17, 20, and 22-24.

Claims 22 and 23 were objected to because the preamble allegedly does not have a transitional phrase that conforms to the standard format. Applicant respectfully submits that there is no "standard" transitional phrase, and each of claims 22 and 23 contains a transitional phrase that adequately separates the preamble of the claim from the body of the claim. M.P.E.P. § 2111.03. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the objection to claims 22 and 23.

Claims 19, 21, 24, and 25 were objected to for allegedly being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant has amended claim 24 to be in independent form and canceled claims 19, 21, and 25. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the objection to claim 24.

Claims 1-16 were rejected under 35 U.S.C. § 112, second paragraph as allegedly being indefinite. Applicant has amended claim 1 in accordance with the Examiner's suggestions. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 1-16 under 35 U.S.C. § 112, second paragraph.

Claims 17-25 were rejected under 35 U.S.C. § 101 as allegedly being directed to non-statutory subject matter. The Examiner alleged that claims 17-25 appear to be

entirely drawn to software and do not appear to produce a tangible result. Applicant respectfully disagrees.

First, each of claims 17, 18, 20, and 22-24 recite structure (e.g., “storing means”, “means for transmitting”, etc.) which falls within an enumerated category of statutory subject matter under 35 U.S.C. § 101 and, thus, cannot be entirely software. The Examiner’s reliance on paragraphs [0058] and [0080] in Applicant’s specification as evidence that the manager or design terminal is entirely software is misplaced. For example, paragraph [0058] states that the manager or design terminal “may be implemented either as hardware components or by introducing a software program into a computer. In the latter case, the program is preferably defined so as to make the computer function as the respective means of the manager or design terminal” (emphasis added). Accordingly, claims 17, 18, 20, and 22-24 are not drawn entirely to software, as alleged by the Examiner.

Second, each of claims 17, 18, 20, and 22-24 clearly produce a tangible result, i.e., a real-world result, since the claims clearly set forth structure that manages and/or designs integrated circuits. Thus, claims 17, 18, 20, and 22-24 have a tangible result.

Third, claims 22 and 23 have been amended to more clearly recite a computer readable medium, which is well accepted statutory subject matter under 35 U.S.C. § 101. The Examiner should note that the structure recited in the body of claims 22 and 23 is not a program *per se*, but rather a computer loaded with the program (note, in particular, the transitional phrase “by making a computer function as:”).

Claims 19, 21, and 25 have been canceled.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 17, 18, 20, and 22-24 under 35 U.S.C. § 101.

Claims 1-14 and 17-25 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Chen et al. (U.S. 2003/0009730) in view of Dole (U.S. 6,634,008) and Haase (“Design Methodology for IP Providers”). Claims 15 and 16 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Chen in view of Dole and Haase, and further in view of Frank et al. (U.S. 6,782,511).

Claims 19, 21, and 25 have been canceled. Applicant respectfully traverses the rejections of claims 1-18, 20, and 22-24.

Amended claim 1 recites:

A method for designing a new integrated circuit (IC) based on IC designing information transmitted from a manager, the IC designing information including standard library designing information and custom library designing information and being stored in, and managed by, the manager, the method comprising the steps of:

(a) transmitting at least part of the IC designing information, including a portion of the standard library designing information, from the manager to a design terminal through the Internet;

(b) designing the new IC by a user located at the design terminal in accordance with the at least part of the IC designing information;

(c) transmitting newly designed IC information, including new IC testing information to evaluate the new IC, from the design terminal to the manager through the Internet;

(d) evaluating the new IC by the manager based on the newly designed IC information; and

(e) **adding at least part of the newly designed IC information to the custom library designing information that is stored in the manager, thereby updating the custom library designing information.** (emphasis added)

Applicant's claims 17, 20, and 22-24 recite features that are similar to the features and method steps recited in Applicant's claim 1, including the above-emphasized features and method step. With the unique combination and arrangement of features and method steps recited in Applicant's claim 1, including the features and method step of "adding at least part of the newly designed IC information to the custom library designing information that is stored in the manager, thereby updating the custom library designing information," Applicant has been able to provide an IC designing method that allows an IC designer to design an IC conveniently and efficiently, and a design manager, a computer terminal for designing (design terminal), an IC designing system and a program product for use in the designing method (see, for example, paragraph [0008] in Applicant's originally filed specification).

The Examiner alleged that the combination of Chen et al., Dole, and Haase teaches all of the features and method steps recited in claims 1, 17, 20, and 22-24. In

particular, the Examiner alleged that Chen et al. teach standard library designing information 220, custom library designing information 208, and adding at least part of the newly designed IC information to the custom library designing information that is stored in the manager, thereby updating the custom library designing information. Applicant respectfully disagrees.

Chen et al. teach that the SOC designs 208 correspond to a new IC. See, for example, paragraph [0005] of Chen et al., which teaches:

Increasingly, designers are putting an entire system in an IC, known as system on chip or SOC. The concept of re-useable intellectual property (IP) or components has emerged to facilitate designers in designing SOC, using existing IP (components) for the "standard" function blocks (such as the compute core, the system bus, memory and the like). (emphasis added)

More specifically, Chen et al. teach in paragraph [0032] that IP packages 206 are used to create the SOC designs 208.

... the present invention includes IP packages 206 constituted in accordance with the teachings of the present invention, and PBS D EDA Tool Suite 204 incorporated with functions and elements provided in accordance with the teachings of the present invention, **to enable designers 202 to efficiently select and employ the IP of IP packages 206 to form SOC designs 208, and/or to verify SOC designs 208.** (emphasis added)

As shown in Fig. 2 of Chen et al., the designer 202 selects from the IP packages 206 to form SOC designs 208, and the SOC designs 208 designed by the designer 202 may be stored in and retrieved from the repository 270. The constituting parts 220 of Chen et al., which the Examiner alleged corresponds to the standard library designing information, may include the various elements of the IP packages 206 that are imported into the repository 270, i.e., hardware components 220, embedded software 224, and test vectors 226. See, for example, paragraphs [0046] and [0051] of Chen et al. Note that the constituting parts 220 originate within the IP packages 206 in Fig. 2 of Chen et al.

Thus, the SOC designs 208 of Chen et al. more closely correspond to the new

IC, and the IP packages 206 of Chen et al. more closely correspond to the standard library designing information used to create the new IC. Although Chen et al. teach customizable attributes and UI element descriptions 216, the customizable attributes and UI element descriptions 216 are included with the IP packages 206 (see, for example, Fig. 2 of Chen et al.).

More importantly, the IP packages 206 of Chen et al. are only available for downloading when designing the SOC designs 208 as evidenced by the one-way arrow between the IP packages 206 box and the PBS D EDA Tool Suite 204 box shown in Fig. 2 of Chen et al. Thus, the designer 202 is able to select from the IP packages 206 to design the SOC designs 208, but the designer 202 is not capable of saving or adding the SOC designs 208 to the IP packages 206 to become part of the IP available for other designers. There is absolutely no teaching or suggestion by Chen et al. that the SOC designs 208 may be used by other designers.

Thus, the combination of Chen et al., Dole, and Haase clearly fails to teach or suggest the features and method step of “adding at least part of the newly designed IC information to the custom library designing information that is stored in the manager, thereby updating the custom library designing information” as recited in Applicant’s claim 1, and similarly in Applicant’s claims 17, 20, and 22-24.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 1, 17, 20, and 22-24 under 35 U.S.C. § 103(a) as being unpatentable over Chen et al. in view of Dole and Haase.

The Examiner relied upon Frank et al. to allegedly cure deficiencies of Chen et al., Dole, and Haase. However, Frank et al. clearly fail to teach or suggest the features and method step of “adding at least part of the newly designed IC information to the custom library designing information that is stored in the manager, thereby updating the custom library designing information,” as recited in Applicant’s claim 1, and similarly in Applicant’s claims 17, 20, and 22-24. Thus, Applicant respectfully submits that Frank et al. fail to cure the deficiencies of Chen et al., Dole, and Haase described above.

Accordingly, Applicant respectfully submits that Chen et al., Dole, Haase, and

Frank et al., applied alone or in combination, fail to teach or suggest the unique combination and arrangement of features and method steps recited in Applicant's claim 1, and similarly in Applicant's claims 17, 20, and 22-24.

In view of the foregoing amendments and remarks, Applicant respectfully submits that claims 1, 17, 20, and 22-24 are allowable. Claims 2-16 and 18 depend upon claims 1 and 17, and are therefore allowable for at least the reasons that claims 1 and 17 are allowable.

In view of the foregoing amendments and remarks, Applicant respectfully submits that this application is in condition for allowance. Favorable consideration and prompt allowance are solicited.

The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1353.

Respectfully submitted,

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